

**REMARKS**

The Examiner rejected claims 27, 33-34 and 39-44 under 35 U.S.C. §102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly obvious over Raaijinakers (U.S. Patent 4,908,331).

Applicants respectfully traverse the §102 and §103 rejections with the following arguments.

### 35 U.S.C. §102(b) and §103(a)

The Examiner rejected claims 27, 33-34 and 39-44 under 35 U.S.C. §102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly obvious over Raaijmakers (U.S. Patent 4,908,331).

Applicants respectfully contend that Raaijmakers does not anticipate claims 27 and 34, because Raaijmakers does not teach or suggest each and every feature of claims 27 and 34. For example, Raaijmakers does not teach or suggest the feature of "wherein the layer of cobalt disilicide is in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide" (claim 27) and Raaijmakers does not teach or suggest the feature of "wherein the first layer of cobalt disilicide, the second layer of cobalt disilicide, and the third layer of cobalt disilicide are each in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide" (claim 34).

The Examiner does not even allege that Raaijmakers teaches or suggests the preceding feature of claims 27 and 34. Instead, the Examiner argues that:

"The terms 'the layer of cobalt disilicide is in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide', 'not adapted to chemically react', '4 percent of a total reagent volume of the reagent' and temperature with a range of about 45 degrees Celsius to about 95 degrees Celsius' are method recitations in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in 'product by process' claims or not. Also note that at the final structure, as shown in Figures 10 and 18 of the present invention, there is no reagent in contact with the cobalt disilicide. Therefore the limitation of reagent is really recited in the intermediate step of forming the cobalt disilicide."

In response to the preceding argument by the Examiner, Applicants respectfully provide the following arguments. First, Applicants contend that the structure of claims 27 and 34 is not an old or obvious product, since the Examiner has not cited a reference that teaches or suggests the preceding feature of claims 27 and 34. Second, the preceding feature of claims 27 and 34 is not a method limitation or a product by process limitation, since the language of claims 27 and 34 expresses the preceding feature in purely structural language, namely that the layer of cobalt disilicide (and other layers in claim 34) is in contact with the reagent. There is no active method language in claims 27 and 34. There is no indication of any process in claims 27 and 34 that forms a product. In summary, the language of claim 34 is purely structural.

Third, the Examiner's has erroneously alleged that a structure existing during an intermediate step of a process has no patentable weight. The Examiner has provided no legitimate legal authority to support this allegation. Applicant's will next cite five **issued** patents, each claiming structure existing during an intermediate step of a process.

United States Patent 6,569,604 to Bhatt et al. (issued May 27, 2003)

Claim 1. An electrical structure, comprising:

- a substrate;
- a photoimageable dielectric (PID) layer on the substrate, wherein the PID layer includes a PID material that is cross-linkable, wherein the PID material becomes cross-linked when exposed to light characterized by a wavelength; and
- a blind via within the PID layer, said blind via having a obtuse-angled sidewall.

Claim 1 is embodied in the intermediate structure shown FIG. 8 and is used to form the composite electrical structure shown in FIG. 10.

United States Patent 6,534,848 to Dornbos et al. (issued March 18, 2003)

Claim 18. An electronic structure, comprising:

a substrate having a first electrically conductive pad on a surface of the substrate; and  
a layer of **uncured** dry adhesive on the substrate, wherein a hole in the uncured dry adhesive includes an **uncured** electrically conductive contact, wherein the electrically conductive contact is electrically coupled to the first electrically conductive pad, and wherein the hole includes a gap between the uncured dry adhesive and the uncured electrically conductive contact.

Claim 18 is embodied in the intermediate structure shown FIG. 1 which depicts the layer of uncured dry adhesive 18 and the uncured electrically conductive contact 16. Uncured layer 18 and uncured contact 16 are subsequently cured (see col. 2, lines 51-52).

United States Patent 6,509,546 to Egilto et al. (issued Jan. 21, 2003)

Claim 18. A laser structure, comprising:

a panel having a two dimensional array of cells, wherein a first kerf between a first pair of adjacent cells has a first width between about 2 microns and about 75 microns, wherein a second kerf between a second pair of adjacent cells has a second width between about 2 microns and about 75 microns, wherein the first and second kerfs have directional orientations that are about perpendicular to each other, and wherein the panel comprises a layered structure that includes a dielectric layer and a metal layer; and

a laser beam focused within the first kerf, wherein the laser beam has a wavelength between about 500 nanometers and about 600 nanometers.

Claim 18 is embodied in the intermediate structure shown FIGS. 1-2 which shows the laser beam focused within the first kerf. The final product is produced after the laser beam has completed excising the panel.

United States Patent 6,348,737 to Advocate, Jr. et al. (issued Feb. 19, 2002)

Claim 1. An electronic structure, comprising:

- a substrate having a metallic sheet interior to a dielectric layer, said metallic sheet including a metal;
- a blind opening through the dielectric layer and partially through the metallic sheet;
- a metallic interlocking structure coupled to a blind surface of the blind opening and projecting into the blind opening, wherein the metallic interlocking structure is integral with a portion of the metallic sheet, wherein the metallic interlocking structure includes metallic fibers, and wherein each metallic fiber has a curved geometry and has its own unique composition that includes material selected from the group consisting of the metal, at least one constituent element of the dielectric layer, and combinations thereof.

Claim 1 is embodied in the intermediate structure shown FIG. 3 which shows the metallic interlocking structure 40. The final product is shown in FIGS. 10-12 in which the metallic interlocking structure 40 has been plated with conductive layer 82.

United States Patent 6,248,961 to Enroth et al. (issued June 19, 2001)

Claim 1. A printed circuit board assembly, comprising:

- a printed circuit board having a top surface, a bottom surface, and a middle layer between the top surface and the bottom surface;
- a conductive pad on the top surface;
- a via extending through the printed circuit board from the top surface to the bottom surface, wherein a conductive lining on an interior wall of the via is conductively coupled to the pad;
- a plug within the via, wherein the plug comprises a nonsolder material; and
- molten solder in contact with an end of the plug, wherein the end of the plug is at the bottom surface, and wherein the plug obstructs flow of the molten solder into the via.

Claim 1 is embodied in the intermediate structure shown FIG. 8 which shows the plug 70 and the molten solder 60 produced by the wave soldering source 70. The final product is depicted in FIG. 9 which shows the printed circuit board 10 following the wave soldering.

The preceding five patents illustrate that the United States Patent Office issues patents regularly in which the patent claims structure existing during an intermediate step of a process. The preceding patents are merely illustrative. If further challenged in an appeal, Applicants will have no difficulty in citing many additional patents similarly illustrating claimed structure existing during an intermediate step of a process. Accordingly, Applicants contend that the Examiner's view that a structure existing during an intermediate step of a process has no patentable weight is contrary to accepted practices and policies of the United States Patent and Trademark Office. Applicants respectfully request that the Examiner provide credible legal authority to support the Examiner's view that a structure existing during an intermediate step of a process has no patentable weight.

In summary, Applicants have provided strong evidence to show that claimed structure existing during an intermediate step of a process has patentable weight, and the Examiner has presented no evidence to the contrary. Therefore, Applicants respectfully contend that the feature in claims 27 and 34 of contact between the layer of cobalt disilicide and the reagent has patentable weight.

Based on the preceding arguments, Applicants respectfully maintain that claims 27 and 34 are not anticipated by Raaijmakers and are not obvious over Raaijmakers, and that claims 27 and 34 are in condition for allowance. Since claims 39-41 depend from claim 27, Applicants contend that claims 39-41 are likewise in condition for allowance. Since claims 33 and 42-44 depend from claim 34, Applicants contend that claims 33 and 42-44 are likewise in condition for allowance.

**CONCLUSION**

Based on the preceding arguments, Applicants respectfully believe that all pending claims 27, 33, 34 and 39-44 and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below.

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